STATE OF MARYLAND
DHMH
Maryland Department of Health and Mental Hygiene
Larry Hogan, Governor - Boyd K. Rutherford, Lt. Governor - Dennis R. Schrader, Secretary

December 23, 2016

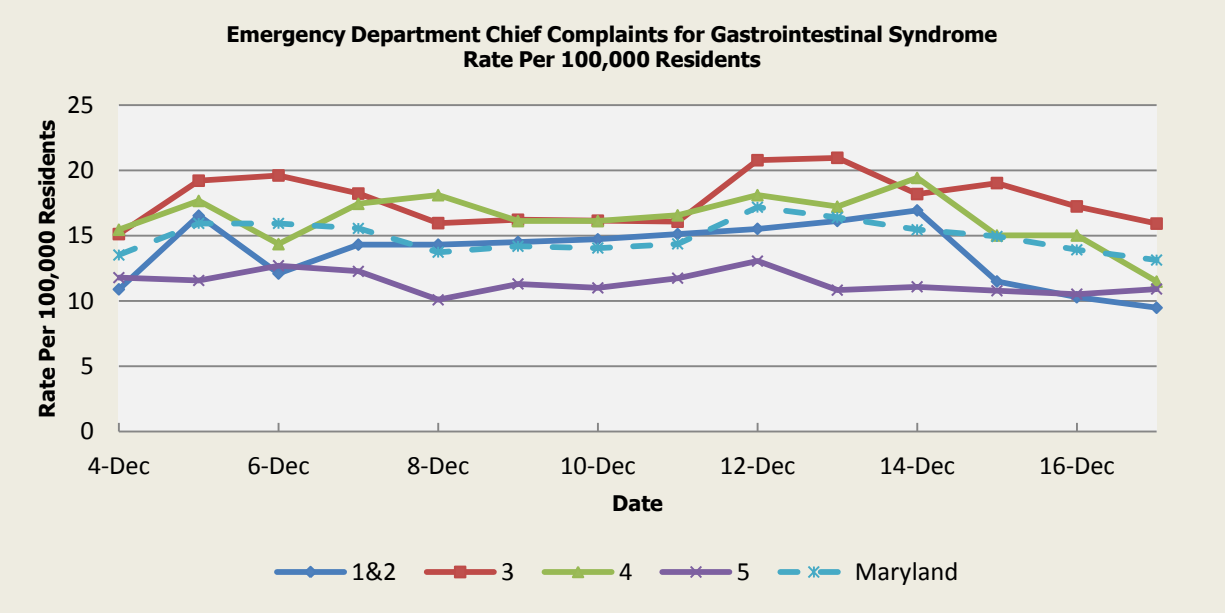
Public Health Preparedness and Situational Awareness Report: #2016:50 Reporting for the week ending 12/17/16 (MMWR Week #50)

CURRENT HOMELAND SECURITY THREAT LEVELS
National: **No Active Alerts**
Maryland: **Level Four (MEMA status)**

SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

Graphical representation is provided for all syndromes (excluding the "Other" category; see Appendix 1) by Health and Medical Regions (See Appendix 2). Emergency department chief complaint data is presented as rates per 100,000 residents using data from the 2010 census.



There were fifteen (15) gastroenteritis/foodborne outbreaks reported this week: five (5) outbreaks of gastroenteritis in Nursing Homes (Regions 1&2,3,4); two (2) outbreak of gastroenteritis in Assisted Living Facilities (Regions 3,5); two (2) outbreak of gastroenteritis associated with School (Region 3,4); one (1) outbreak of gastroenteritis in an Institution (Region 3); four (4) outbreaks of gastroenteritis/foodborne associated with Restaurant (Regions 3,5); one (1) outbreak of gastroenteritis/foodborne associated with a School (Region 3).

	Gastrointestinal Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	12.94	14.88	15.42	10.31	13.01
Median Rate*	12.70	14.47	14.80	10.17	12.75

* Per 100,000 Residents

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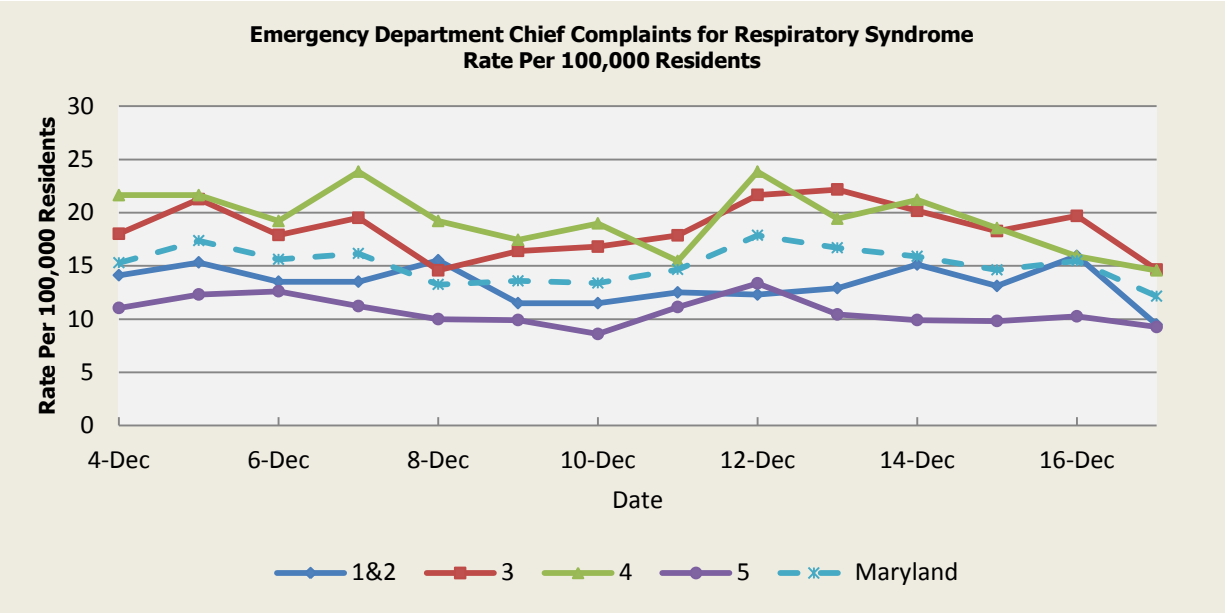
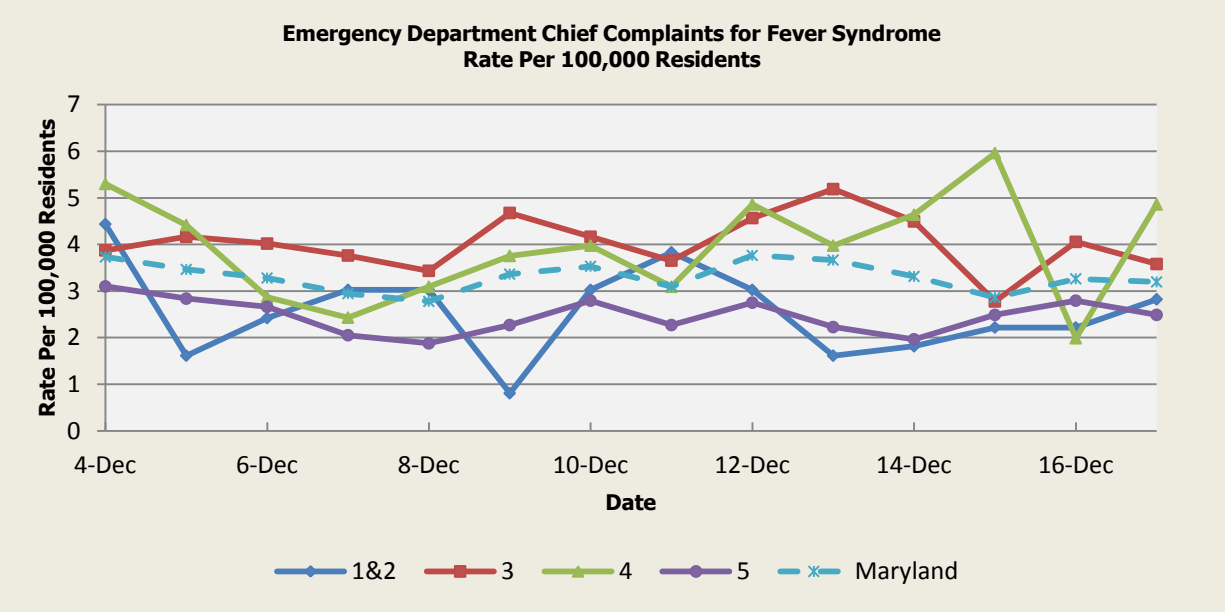


There were four (4) respiratory illness outbreaks reported this week: one (1) outbreak of Influenza Like Illness (ILI) associated with a Daycare Center (Region 3); two (2) outbreaks of ILI/Pneumonia in a Nursing Facility (Region 1&2,3); one (1) outbreak of Pneumonia in a Nursing Home (Regions 1&2).

	Respiratory Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	11.99	14.12	14.04	9.94	12.34
Median Rate*	11.70	13.37	13.69	9.52	11.79

* Per 100,000 Residents



There were no fever outbreaks reported this week.

	Fever Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	3.07	3.80	3.93	3.09	3.48
Median Rate*	3.02	3.62	3.75	2.97	3.35

Per 100,000 Residents

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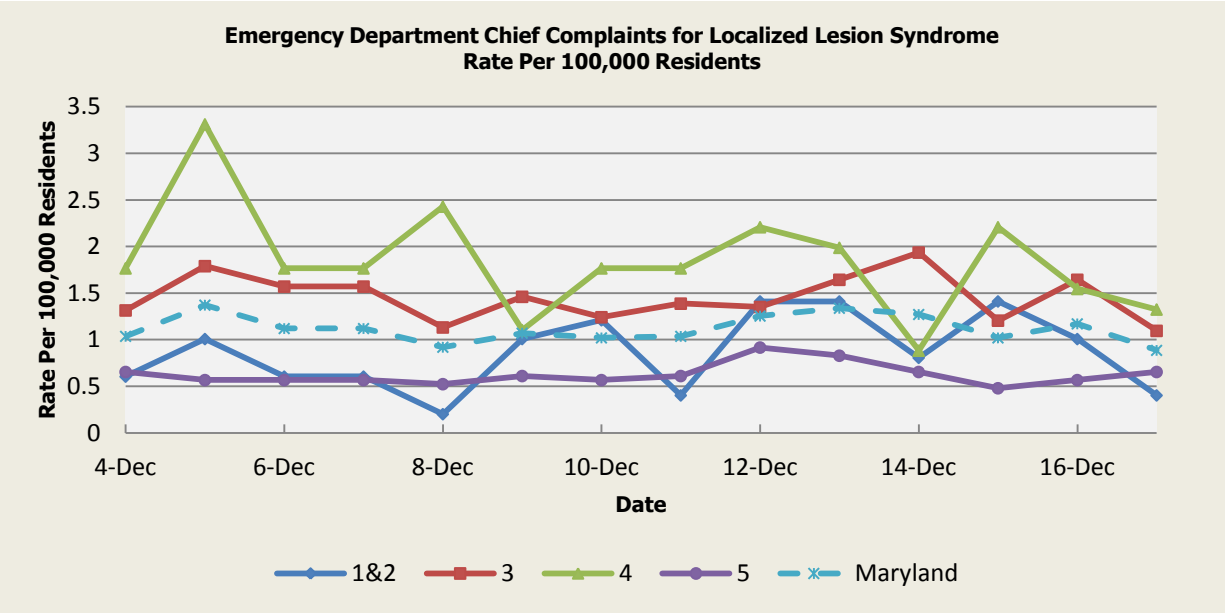
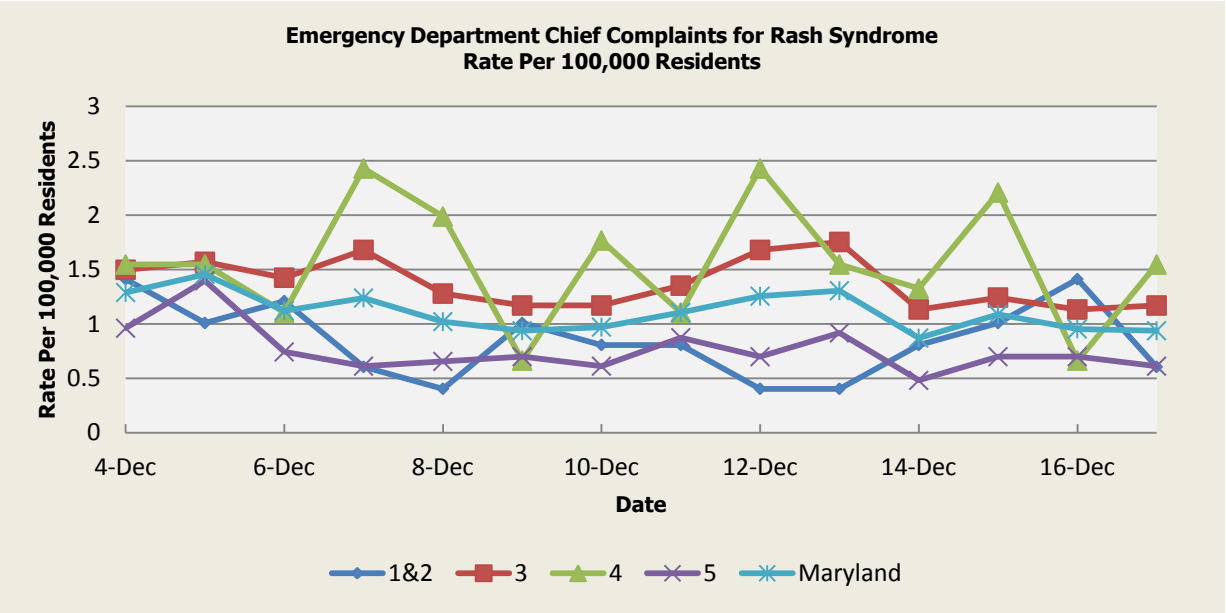


There were no localized lesion outbreaks reported this week.

	Localized Lesion Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	1.07	1.91	2.03	0.98	1.49
Median Rate*	1.01	1.86	1.99	0.92	1.44

* Per 100,000 Residents



There was one (1) rash illness outbreaks reported this week: one (1) outbreak of SCABIES in an Assisted Living Facility (Region 5).

	Rash Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	1.30	1.75	1.75	1.04	1.44
Median Rate*	1.21	1.68	1.77	1.00	1.39

* Per 100,000 Residents

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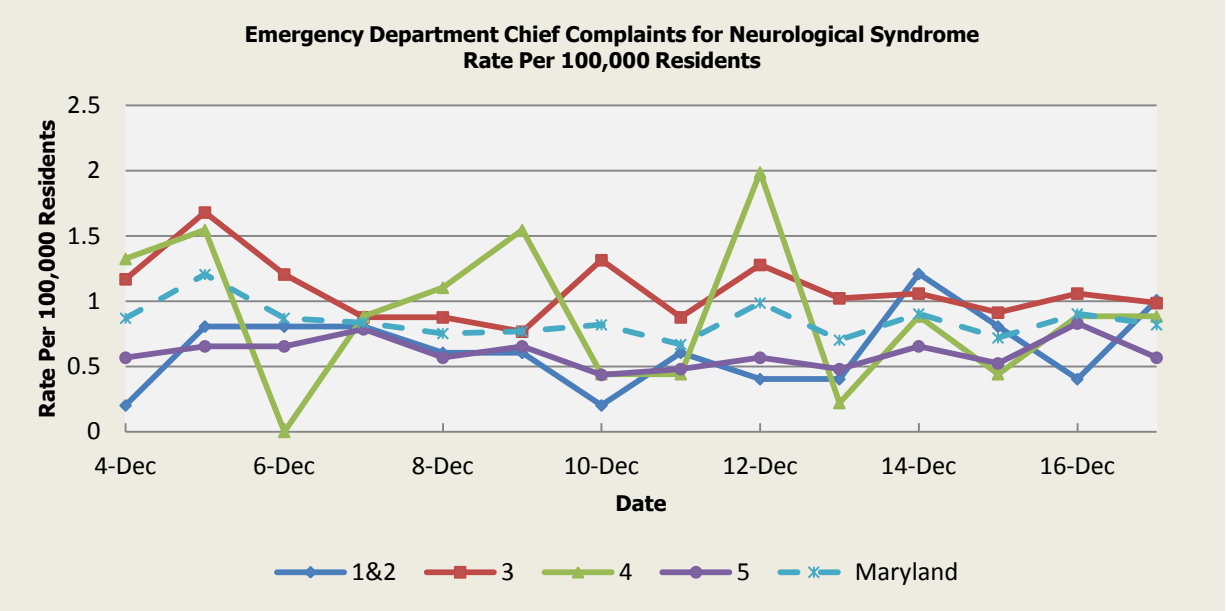
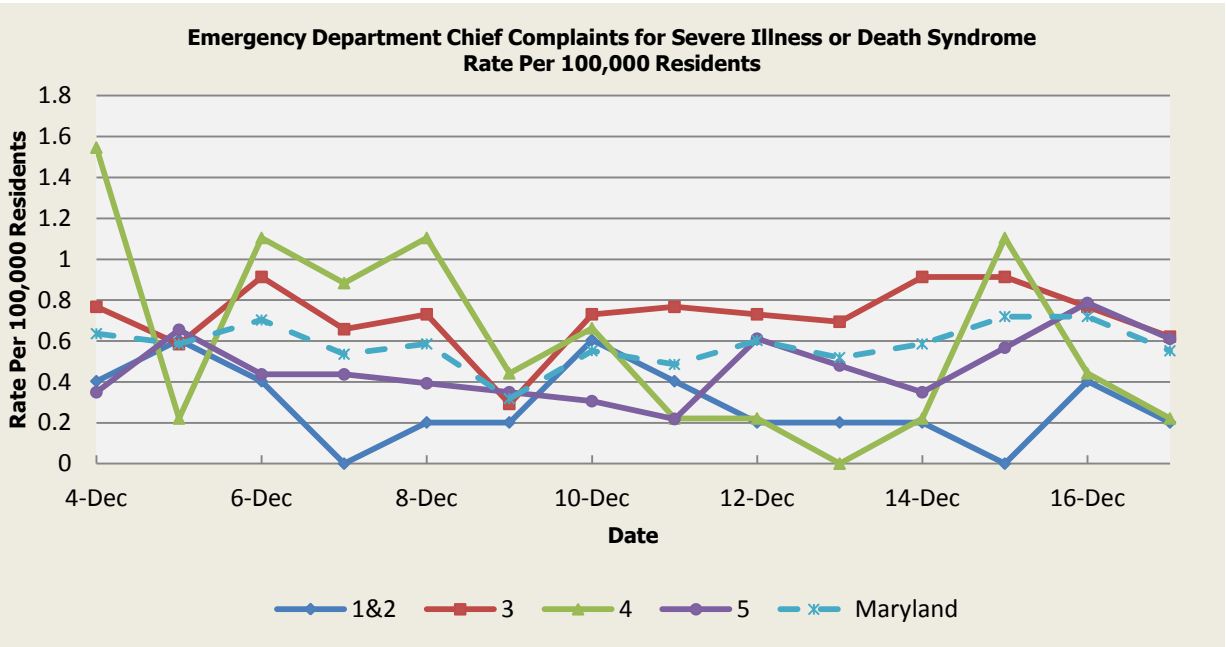


There were no neurological syndrome outbreaks reported this week.

	Neurological Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.63	0.73	0.65	0.48	0.62
Median Rate*	0.60	0.66	0.66	0.44	0.57

* Per 100,000 Residents



There were no severe illness or death outbreaks reported this week.

	Severe Illness or Death Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.70	0.95	0.84	0.44	0.73
Median Rate*	0.60	0.91	0.88	0.44	0.72

* Per 100,000 Residents

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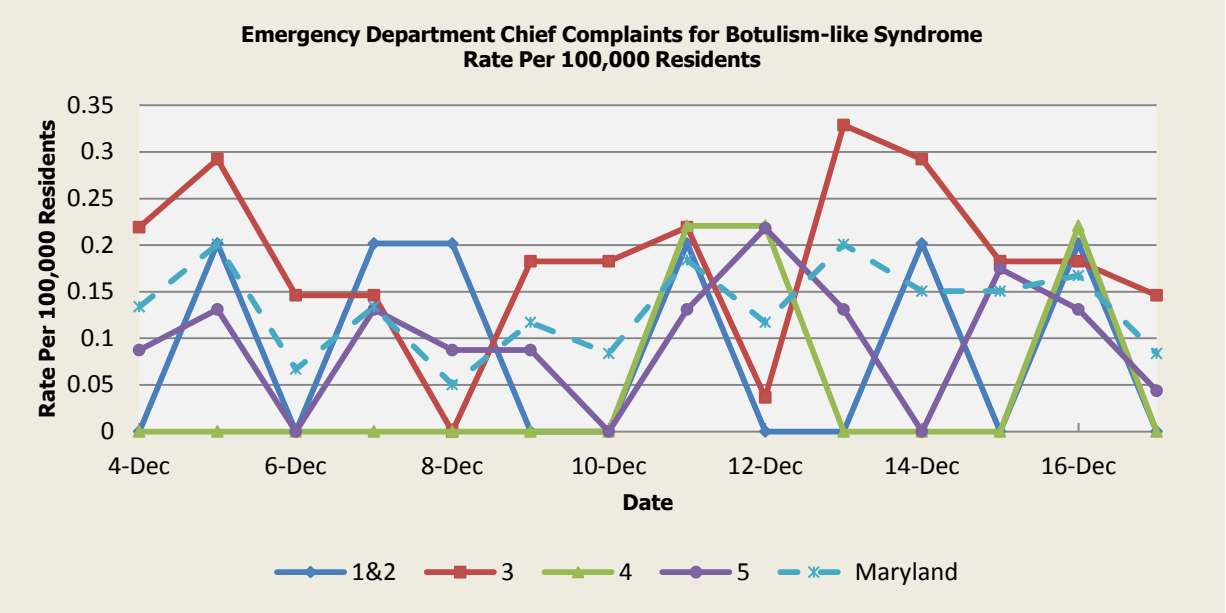
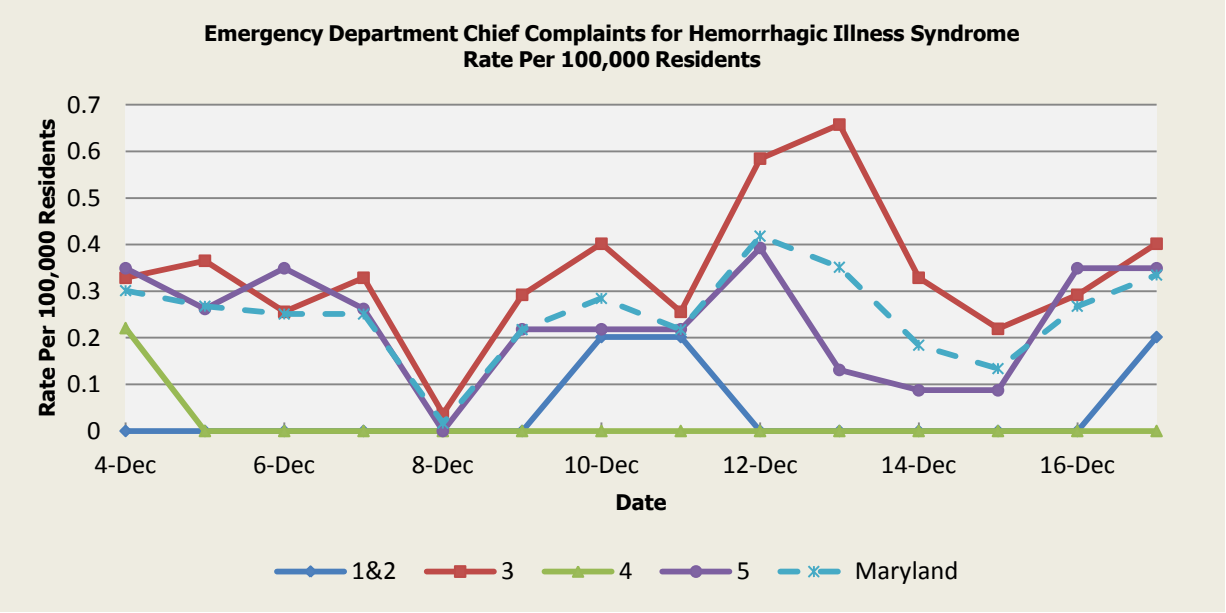
SYNDROMES RELATED TO CATEGORY A AGENTS



There was an appreciable increase above baseline in the rate of ED visits for Botulism-like Syndrome on 12/04 (Region 3), 12/05 (Regions 1&2,3,5), 12/7 (Regions 1&2,5), 12/08 (Regions 1&2), 12/09 (Region 3), 12/10 (Region 3), 12/11 (Regions 1&2,3,4,5), 12/12 (Regions 4,5), 12/13 (Regions 3,5), 12/14 (Regions 1&2,3), 12/15 (Regions 3,5), and 12/16 (Regions 1&2,3,4,5). These increases are not known to be associated with any outbreaks.

	Botulism-like Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.06	0.08	0.04	0.05	0.06
Median Rate*	0.00	0.04	0.00	0.04	0.05

* Per 100,000 Residents



There was an appreciable increase above baseline in the rate of ED visits for Hemorrhagic Illness Syndrome on 12/04 (Region 3,5), 12/05 (Regions 3,5), 12/06 (Regions 3,5), 12/07 (Regions 3,5), 12/09 (Regions 3,5), 12/10 (Regions 1&2,3,5), 12/11 (Regions 1&2,3,5), 12/12 (Regions 3,5), 12/13 (Region 3), 12/14 (Region 3), 12/15 (Region 3), 12/16 (Regions 3,5), and 12/17 (Regions 1&2,3,5). These increases are not known to be associated with any outbreaks.

	Hemorrhagic Illness Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.03	0.11	0.03	0.08	0.08
Median Rate*	0.00	0.04	0.00	0.04	0.03

* Per 100,000 Residents

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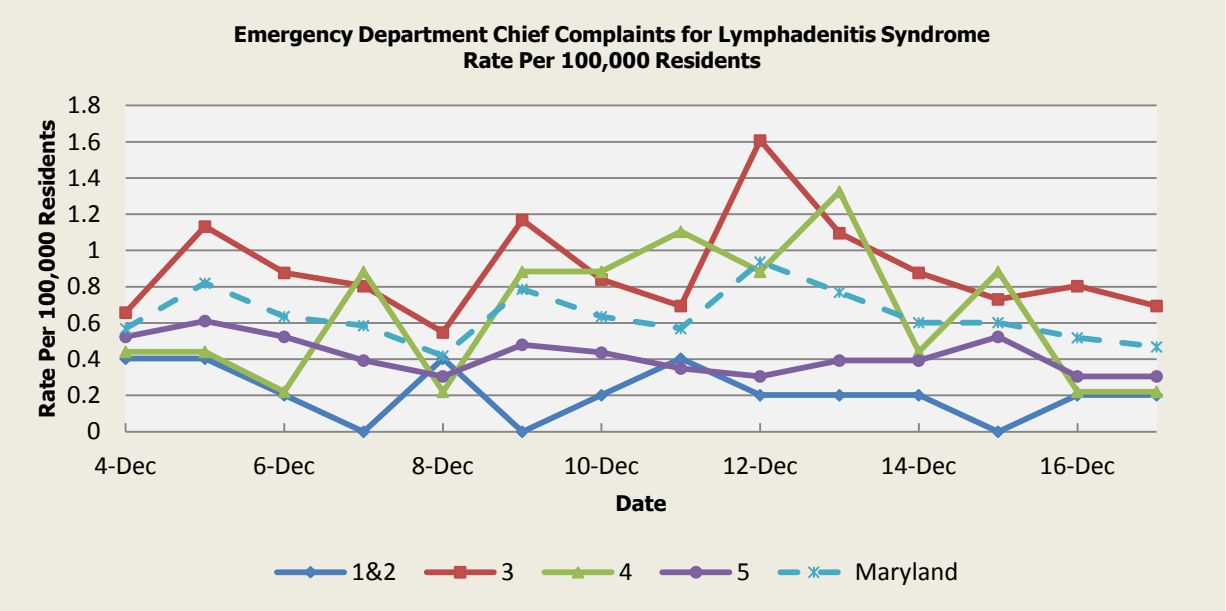

There was an appreciable increase above baseline in the rate of ED visits for Lymphadenitis Syndrome on 12/05 (Regions 3,5), 12/07 (Region 4), 12/09 (Regions 3,4), 12/10 (Region 4), 12/11 (Region 4), 12/12 (Region 3,4), 12/13 (Regions 3,4), and 12/15 (Region 4). These increases are not known to be associated with any outbreaks.

	Lymphadenitis Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.31	0.51	0.34	0.31	0.40
Median Rate*	0.20	0.37	0.22	0.26	0.33

* Per 100,000 Residents

MARYLAND REPORTABLE DISEASE SURVEILLANCE

	Counts of Reported Cases‡					
Condition	**December**			**Cumulative (Year to Date)****		
Vaccine-Preventable Diseases	**2016**	**Mean***	**Median***	**2016**	**Mean***	**Median***
Aseptic meningitis	9	23.4	25	338	456	460
Meningococcal disease	0	0.2	0	3	7	5
Measles	0	0	0	4	4.6	3
Mumps	1	0.8	0	21	38.8	17
Rubella	0	0	0	1	2.4	2
Pertussis	9	21.6	24	246	311	364
Foodborne Diseases	**2016**	**Mean***	**Median***	**2016**	**Mean***	**Median***
Salmonellosis	8	25.2	23	779	892.4	897
Shigellosis	2	6.8	4	135	178.4	220
Campylobacteriosis	11	27.8	27	709	683	679
Shiga toxin-producing Escherichia coli (STEC)	2	3.8	3	186	122	111
Listeriosis	1	0.6	0	21	17	16
Arboviral Diseases	**2016**	**Mean***	**Median***	**2016**	**Mean***	**Median***
West Nile Fever	0	0.2	0	2	12	10
Lyme Disease	25	33.8	33	1824	1444.4	1540
Emerging Infectious Diseases	**2016**	**Mean***	**Median***	**2016**	**Mean***	**Median***
Chikungunya	1	1	0	7	17.2	0
Dengue Fever	0	0.6	0	41	16.8	17
Zika Virus***	0	0	0	130	0.2	0
Other	**2016**	**Mean***	**Median***	**2016**	**Mean***	**Median***
Legionellosis	5	8.2	9	148	166.4	169

‡ Counts are subject to change *Timeframe of 2011-2015 **Includes January through current month
*** As of December 23, 2016, the total Maryland Confirmed and Probable Cases of Zika Virus Disease and Infection is 158.

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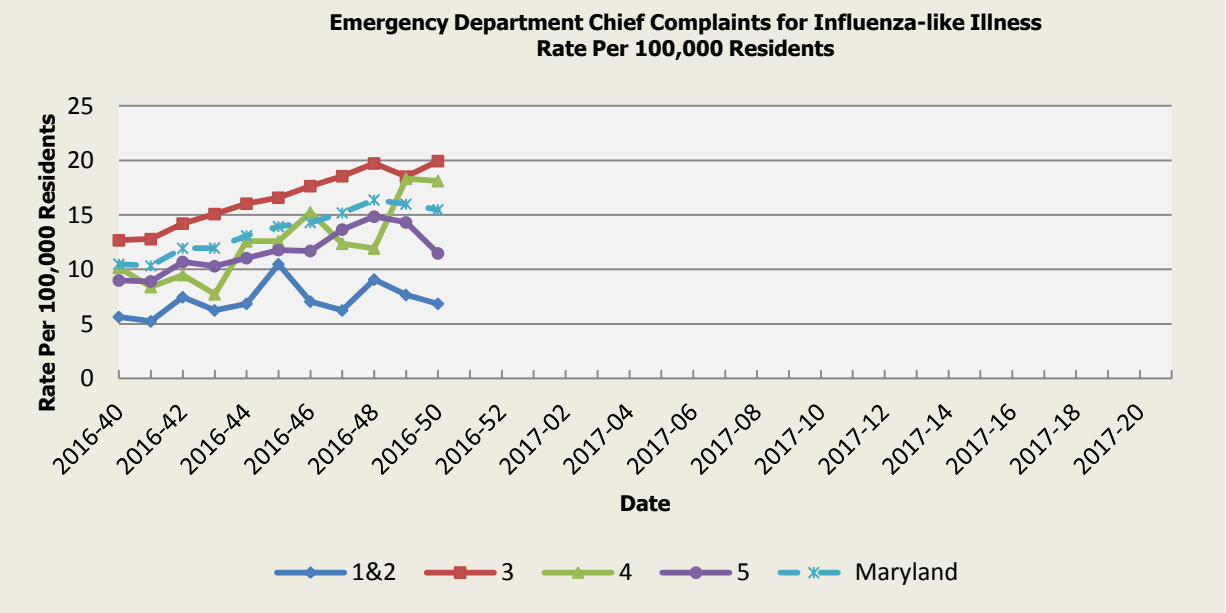
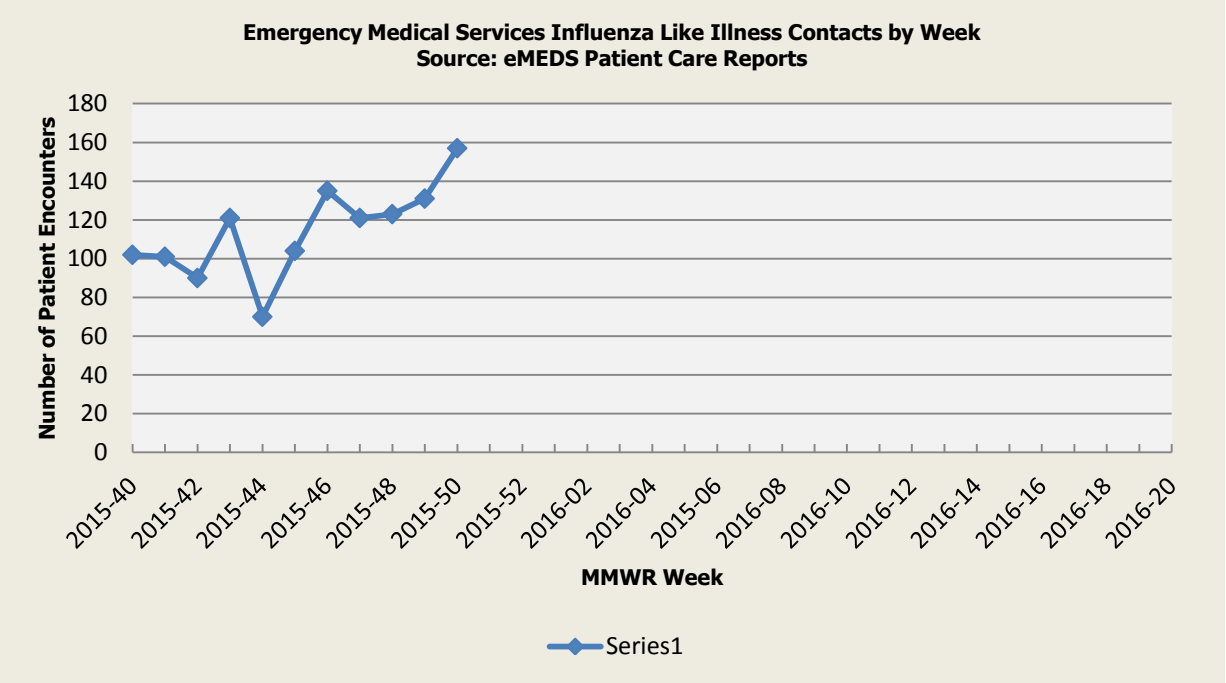
SYNDROMIC INFLUENZA SURVEILLANCE

Seasonal Influenza reporting occurs from MMWR Week 41 through MMWR Week 20 (October through May). Seasonal Influenza activity for Week 50 was: Local Geographic Spread with Minimal Intensity.



	Influenza-like Illness Baseline Data Week 1 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	9.26	11.58	10.78	10.43	10.88
Median Rate*	7.66	8.99	9.05	8.03	8.72

* Per 100,000 Residents



Disclaimer on eMEDS flu related data: This data is based on EMS Pre-hospital care reports where the EMS provider has selected "flu like illness" as a primary or secondary impression of a patient's illness. This impression is solely based on the signs and symptoms seen by the provider, not on any diagnostic tests. Since these numbers do not include all primary or secondary impressions that may be seen with influenza the actual numbers may be low. This data is reported for trending purposes only.

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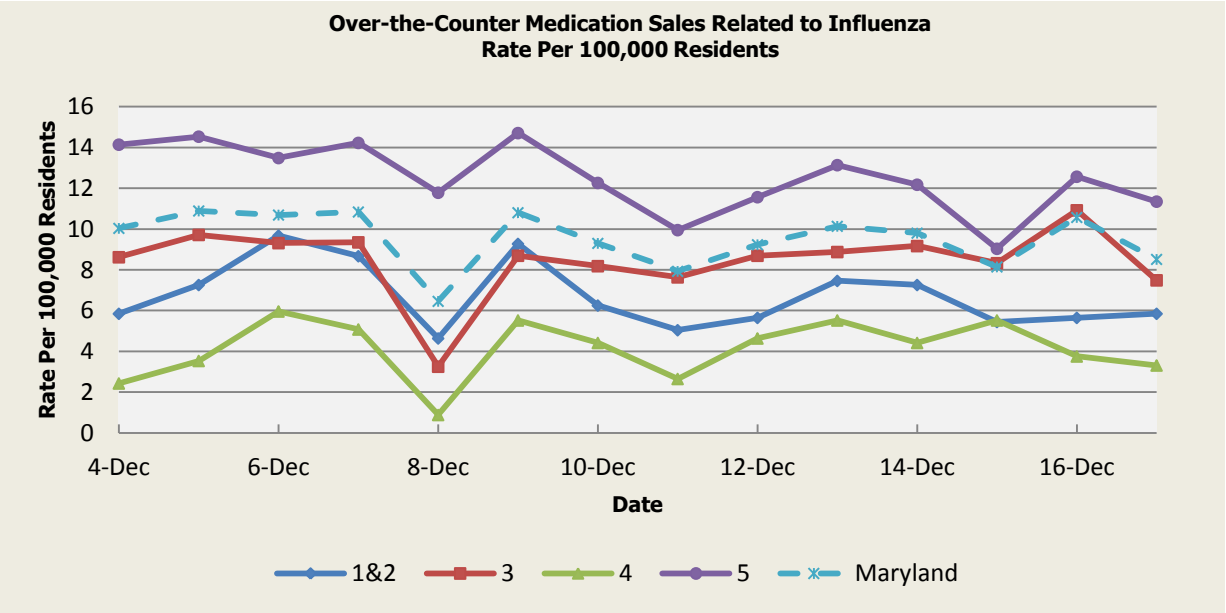
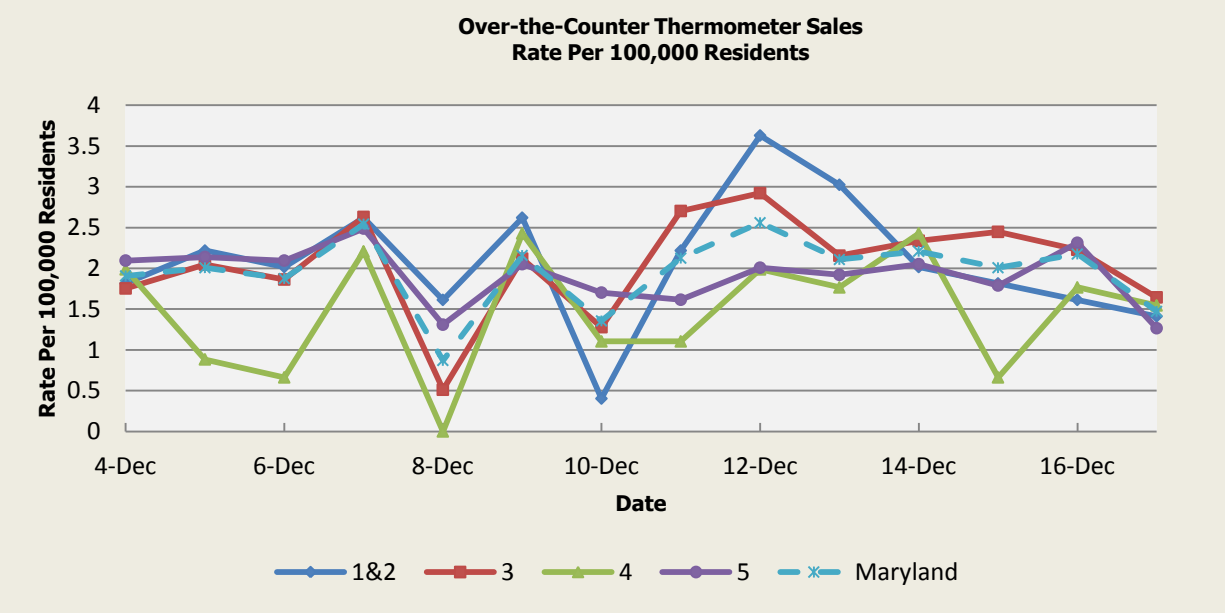


There was an appreciable increase above baseline in the rate of OTC medication sales on 12/05 (Region 3), 12/06 (Regions 1&2,4), 12/07 (Regions 1&2), 12/09 (Regions 1&2,4), 12/13 (Region 4), 12/15 (Region 4), and 12/16 (Region 3). These increases are not known to be associated with any outbreaks.

	OTC Sales Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	3.86	4.69	2.60	8.21	5.79
Median Rate*	2.82	3.98	2.21	7.60	5.19

* Per 100,000 Residents



There was not an appreciable increase above baseline in the rate of OTC thermometer sales this week.

	Thermometer Sales Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	3.48	3.30	2.54	4.50	3.72
Median Rate*	3.23	3.07	2.43	4.10	3.46

* Per 100,000 Residents

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PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is ALERT. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

Influenza A (H7N9) is one of a subgroup of influenza viruses that normally circulate among birds. Until recently, this virus had not been seen in people. However, human infections have now been detected. As yet, there is limited information about the scope of the disease the virus causes and about the source of exposure. The disease is of concern because most patients have been severely ill. There is no indication thus far that it can be transmitted between people, but both animal-to-human and human-to-human routes of transmission are being actively investigated.

Alert phase: This is the phase when influenza caused by a new subtype has been identified in humans. Increased vigilance and careful risk assessment, at local, national and global levels, are characteristic of this phase. If the risk assessments indicate that the new virus is not developing into a pandemic strain, a de-escalation of activities towards those in the interpandemic phase may occur. As of December 19, 2016, the WHO-confirmed global total (2003-2016) of human cases of H5N1 avian influenza virus infection stands at 856, of which 452 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 53%.

Avian Influenza:

HPAI H5N8 (EUROPE, MIDDLE EAST, AFRICA): 21 Dec 2016, Since the previous weekly situation report on 12 Dec 2016, new highly pathogenic avian influenza (HPAI) subtype H5N8 outbreaks have been reported in Europe, mainly in Germany (120 cases in birds compared to 98 last week) And Hungary (201 households compared to 120 last week). The United Kingdom declared its first outbreak on 17 Dec 2016 in a turkey farm in the Lincolnshire region, presenting a surprisingly very high reported mortality (2408 animals died out of a total of 2428; a mortality rate of 99 percent). Livestock in Serbia are now affected with a first outbreak reported on 15 Dec 2016 (species not specified). The total number of outbreaks and cases reported continues to increase and is now 558 (compared to 406 last week), including 292 in wild birds (53 various species affected), 259 in farms and 7 in breeding of captive avifauna. The HP H5N8 virus is also present beyond Europe with an outbreak of HPAI H5N8 in breeding poultry in Israel [reported on 13 Nov 2016]; and now for the first time in Egypt reported on 30 Nov 2016; Ukraine reported on 30 Nov 2016; and Tunisia reported on 1 Dec 2016; Iran reported between 14 and 28 Nov 2016; as well as reports including locations in Russia, Nigeria, Bulgaria, and the Ukraine. Read More: http://www.promedmail.org/post/4712786

HPAI H5 (JAPAN): 19 Dec 2016, A total of 3 black swans that died at a zoo in Nagoya [by the end of Nov 2016] were all confirmed to have been infected with avian influenza. The infections at Higashiyama Zoo Botanical Gardens in the central Japan city are the second cases in the country this year [2016] in which birds kept at a zoo were infected. Other birds at the zoo that were possibly in close contact with the swans have been isolated and will not be culled, a zoo official said. The 3 birds died between 29 Nov and 6 Dec [2016]. Of them, one (1) had tested positive in an initial test while the other two (2) tested negative, but further tests conducted by Tottori University confirmed all of them to have been infected with the highly virulent H5 strain of the bird flu virus, the prefecture said. Read More: http://www.promedmail.org/post/4709279

AVIAN INFLUENZA – HUMAN (CHINA): 18 Dec 2016, The Chinese National Health and Family Planning Commission reported 5 additional human cases of avian influenza A(H7N9) on the Mainland. The details of the cases are as follows: a 59-year-old male from Fuzhou, Fujian, exposed to poultry market, in serious condition; a 58-year-old male farmer from Kunshan, Jiangsu, in serious condition; a 63-year-old male from Nantong, Jiangsu, exposed to poultry market, in serious condition; a 32-year-old male from Kunshan, Jiangsu, exposed to poultry market, in serious condition; and a 64-year-old male from Suzhou, Jiangsu, exposed to poultry market, in serious condition. From 2013 to date [13 Dec 2016], 783 human cases of avian influenza A(H7N9) have been reported by the Mainland health

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authorities. In addition to the cases reported on the Mainland, 23 cases imported from China have been reported in Canada (2), Hong Kong (16), Malaysia (1) and Taiwan (4). Read More: http://www.promedmail.org/post/4705001

NATIONAL DISEASE REPORTS

MUMPS (USA – ARKANSAS, TEXAS): 21 Dec 2016, The Arkansas mumps outbreak continues with about 2200 cases actively under investigation, a type of outbreak that hasn't been seen since the 1970s. Health officials have tracked the strain to an initial outbreak at an Iowa college with approximately 12 new cases were reported last week [week of 12 Dec 2016]. The Health Department reports that mumps has spread from Arkansas to Texas and Oklahoma. The Marshallese population in Northwest Arkansas has been especially hard-hit. About 60 percent of the region's cases have affected people in that community. The week of 5 Dec 2016, the Texas Department of State Health Services issued an advisory of an outbreak of mumps in Johnson County, with additional cases identified in Collin, Dallas, Denton, and Tarrant Counties. Read more: http://www.promedmail.org/post/4713166

PERTUSSIS (CALIFORNIA): 18 Dec 2016, Cases of whooping cough are affecting some Palo Alto [California] middle and high school students, prompting school officials to send students with any type of cough home and to the doctor for testing, a school district spokesman said this week. The highly contagious disease has been confirmed in students at three (3) schools: Jordan Middle School and Palo Alto and Gunn high schools. Students who have already been vaccinated have been confirmed with whooping cough, underlining the importance of receiving booster shots since the shot does not provide lifetime immunity. Read More: http://www.promedmail.org/post/4706211

MYCOBACTERIUM ABSCESSUS (CALIFORNIA): 14 Dec 2016, Orange County's public health officer ordered another shutdown Friday [16 Dec 2016] of the Children's Dental Group of Anaheim [California], where dozens of children were affected by a bacterial outbreak. On 15 Sep [2016], the dental office was ordered to stop conducting pulpotomy procedures and replace its internal water processing system. When that job was completed, the ban was lifted 7 Nov [2016]. Test results Thursday [15 Dec 2016], however, showed there was *Mycobacterium* in the office's internal water system, and as of Tuesday [13 Dec 2016], county health officials said they had logged 58 cases involving the clinic, with 20 confirmed to be infected and the rest probably infected. All 58 have been hospitalized at least once at some point. They range in age from 2 to 10 [years] and underwent procedures from March through 11 Aug [2016]. Read more: http://www.promedmail.org/post/4706109

INTERNATIONAL DISEASE REPORTS

CHIKUNGUNYA (PAKISTAN): 21 Dec 2016, on Wed 21 Dec 2016, Sindh health officials report that chikungunya virus is spreading in Karachi after initial reports of a mysterious disease that caught more than 30,000 patients in one month. An additional 700 people were admitted to Saudabad Hospital in 24 hours over complaints with chikungunya virus in Karachi's Malir. Sources report that the disease has been spread to adjoining areas of Malir including Korangi, Madina Colony, Liaquat Market, and Khokhrapar. The provincial government has said that the disease would be declared epidemic after confirmation from World Health Organization (WHO). Until this point in time, no case of chikungunya had ever been confirmed in Pakistan. Read More: http://www.promedmail.org/post/4715533

MUMPS (CANADA): 21 Dec 2016, Cases of mumps in health care workers at the Hopital Fleurimont and Hotel-Dieu in Sherbrooke [Quebec] have been confirmed by the Estrie Public Health Department. The reported cases, 4 confirmed and 1 probable, have all been investigated and there is no evidence of transmission of the disease among contacts of the patients at this time. The people who circulated between 1 and 13 Dec [2016] in the areas (surgery, radiology, emergency, intensive care, and the fetal and maternal clinic of the Fleurimont Hospital and surgery of the Hotel-Dieu, hospital) are asked to keep a look out for the appearance of symptoms and to consult a physician if necessary. Read More: http://www.promedmail.org/post/4713168

MENINGITIS (ITALY): 18 Dec 2016, Italian health officials report that a 4-year-old child from Pisa has been transferred to the Meyer Children's Hospital in Florence. The child is affected by *Neisseria meningitidis serogroup C*, the same that has been circulating in Tuscany since 2015, when it caused 31

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cases of meningitis or sepsis; the present case is the 29th case in 2016. The child is in critical condition. This case is particularly worrying because the child had been vaccinated, as were 12 others of the 60 in the current outbreak, which is occurring in a limited part of Tuscany, where a massive vaccination campaign has been launched. Contacts of the case are being traced and treated according to protocols. So far, there has been no secondary case. Read More: http://www.promedmail.org/post/4706311

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/ or follow us on Facebook at www.facebook.com/MarylandOPR.

More data and information on influenza can be found on the DHMH website:
http://phpa.dhmh.maryland.gov/influenza/fluwatch/Pages/Home.aspx

Please participate in the Maryland Resident Influenza Tracking System (MRITS): http://flusurvey.dhmh.maryland.gov

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NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail us. If you have information that is pertinent to this notification process, please send it to us to be included in the routine report.

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Appendix 1: ESSENCE Syndrome Definitions and Associated Category A Conditions

Syndrome	ESSENCE Definition	Category A Conditions
Botulism-like	(Botulism or (DifficultyFocusing and DifficultySpeaking) or (DifficultySpeaking and DifficultySwallowing) or (DifficultySwallowing and DifficultyFocusing) or DoubleVision or FacialParalysis or GuillainBarre or Ptosis) and not GeneralExclusions	Botulism
Fever	(Chills or (FeverPlus and (Drowsiness or Seizure)) or FeverOnly or SepsisGroup or ViralSyndrome) and not GeneralExclusions	N/A
Gastrointestinal	(AbdominalCramps or AbdominalPainGroup or Diarrhea or FoodPoisoning or Gastroenteritis or GIBleeding or Peritonitis or Vomiting) and not (GeneralExclusions or Gynecological or Obstetric or Reproductive or UrinaryTract)	Anthrax (gastrointestinal)
Hemorrhagic Illness	(FeverOrChills and (AcuteBloodAbnormalitiesGroup or BleedingFromMouth or BleedingGums or GIBleeding or Hematemesis or Hemoptysis or Nosebleed or Petechiae or Purpura)) and not GeneralExclusions	Viral Hemorrhagic Fever
Localized Lesion	(Boils or Bump or Carbuncle or DepressedUlcer or Eschar or Furuncle or InsectBite or SkinAbscess or (SkinSores and not AllOverBody) or SkinUlcer or SpiderBite) and not (GeneralExclusions or Decubitus or Diabetes or StasisUlcer)	Anthrax (cutaneous) Tularemia
Lymphadenitis	(BloodPoisoning or Bubo or CatScratchDisease or SwollenGlands) and not GeneralExclusions	Plague (bubonic)
Neurological	(([Age<75] and AlteredMentalStatus) or (FeverPlus and (Confusion or Drowsiness or Petechiae or StiffNeck)) or Delirium or Encephalitis or Meningitis or UnconsciousGroup) and not GeneralExclusions	N/A
Rash	(ChickenPox or Measles or RashGeneral or Roseola or (Rubella and not Pregnancy) or Shingles or (SkinSores and AllOverBody) or Smallpox) and not GeneralExclusions	Smallpox
Respiratory	(Anthrax or Bronchitis or (ChestPain and [Age<50]) or Cough or Croup or DifficultyBreathing or Hemothorax or Hypoxia or Influenza or Legionnaires or LowerRespiratoryInfection or Pleurisy or Pneumonia or RespiratoryDistress or RespiratoryFailure or RespiratorySyncytialVirus or RibPain or ShortnessOfBreath or Wheezing) and not (GeneralExclusions or Cardiac or (ChestPain and Musculoskeletal) or Hyperventilation or Pneumothorax)	Anthrax (inhalational) Tularemia Plague (pneumonic)
Severe Illness or Death	CardiacArrest or CodeGroup or DeathGroup or (Hypotension and FeverPlus) or RespiratoryArrest or SepsisGroup or Shock	N/A

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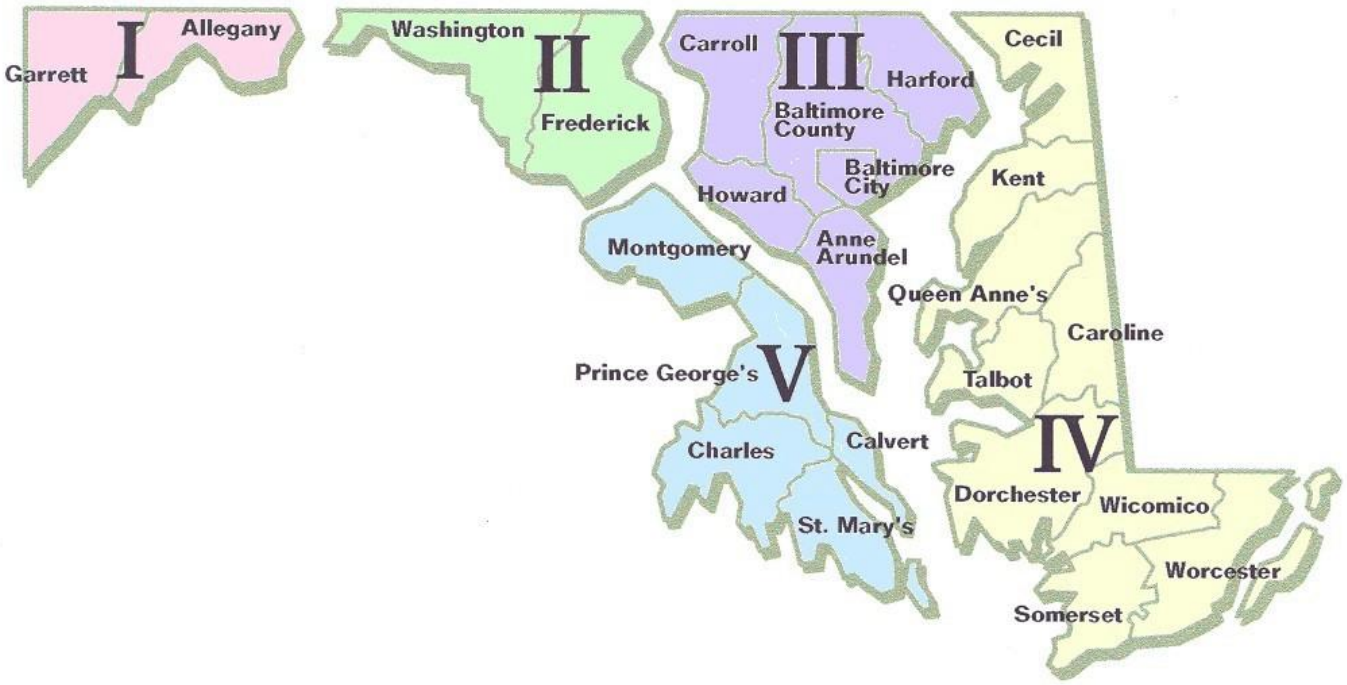
Appendix 2: Maryland Health and Medical Region Definitions

Health and Medical Region	Counties Reporting to ESSENCE
Regions 1 & 2	Allegany County Frederick County Garrett County Washington County
Region 3	Anne Arundel County Baltimore City Baltimore County Carroll County Harford County Howard County
Region 4	Caroline County Cecil County Dorchester County Kent County Queen Anne's County Somerset County Talbot County Wicomico County Worcester County
Region 5	Calvert County Charles County Montgomery County Prince George's County St. Mary's County



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